BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-3500 WP

HIGH PERFORMANCE OFFSHORE WIND TURBINE ENGINEERED GROUT

DESCRIPTION

SikaGrout®-3500 WP is a 1-part, cementitious, free flowing grout with high early and final strengths. Specifically designed for offshore wind turbine foundation joint filling. Layer thickness: 50–200 mm. Application temperature range +2 °C to +25 °C.

USES

Grouted joints on the following foundations:
- Monopiles
- Jackets
- Tripods

SikaGrout®-3500 WP is suitable for the following concrete exposure classes:
X0, XC 1-4, XD 1-3, XS 1-3, XF 1-4, XA 1-2, WA

CHARACTERISTICS / ADVANTAGES

- Rapid strength development
- Long workability
- Good flowability ensuring complete filling of joints
- Good stability including under water
- Volume stable
- Low temperature application

APPROVALS / CERTIFICATES

- Applicability of the Fatigue Verification CEB-FIP Model Code 90, fib-Model Code 2010 and DNV-OS-C502, SikaGrout®-3500 WP, Leibniz Universität Hannover, Expert's report
- Fatigue Behaviour Under Pure Compression Tested Under Water CEB-FIP Model Code 90, fib-Model Code 2010 and DNV-OS-C502, SikaGrout®-3500 WP, Leibniz Universität Hannover, Expert's report
- Production and Application of Cement Based Grout DAfStb Guideline, SikaGrout®-3500 WP, kiwa, Test report No. 16/0281-1/LA

PRODUCT INFORMATION

Composition	Cement, selected fillers and aggregates, special additives
Packaging	25 kg, 1000 kg, 1500 kg bags
Appearance / Colour	Grey powder
Shelf life	12 months from date of production
Storage conditions	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.
Maximum Grain Size	D_{max}:~ 5 mm

TECHNICAL INFORMATION

Compressive Strength

Early strength: class A, to Guideline DAfStb.
100 mm cubes

Temperature	Curing Time		(EN 12390)
	24 hours	**28 days**	
+20 °C	> 50 MPa	~130 MPa	
+5 °C	> 20 MPa		
+3 °C	>10 MPa		

Equivalent to class C 100/115 concrete (150 × 300 cylinders) (EN 206-1)

Shrinkage	Shrinkage class SVKB 0 according to DAfStb Guideline
Expansion	> 0,1 % volume after 24 hours.

APPLICATION INFORMATION

Mixing Ratio	81–85 L of water for 1000 kg of powder at +20 °C 83–87 L of water for 1000 kg of powder at +2 °C
Fresh Mortar Density	~2,3 kg/l
Yield	1000 kg of powder yields ~516 litres of mortar
Layer Thickness	50 mm min. / 200 mm max.
Flowability	a2 (> 550 mm diameter) after 4 hours (DAfStb 2011)
Ambient Air Temperature	+2 °C min. / +25 °C max.
Pot Life	~4 hours at temperatures in the range from +2 °C to +30 °C

APPLICATION INSTRUCTIONS

MIXING

SikaGrout®-3500 WP must be mixed using suitable grout mixing equipment combined with agitator for continuous large volume mixing. Volume capacity of equipment must be applicable to the volume of material being mixed for a continuous operation. Equipment trials must be considered to ensure product can be mixed satisfactory.
Pour the minimum water ratio in the correct proportion into the grout mixer. While stirring the water, slowly add the powder to the water. Add more water within the mixing time up to the maximum allowed until the desired consistency is achieved.
Mix continuously for a minimum of 7 minutes until the grout achieves a lump free smooth consistency. Do not add more water than the maximum specified.

APPLICATION

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.
Placing: Grout pump application
Equipment trials must be considered to ensure product can be pumped satisfactory.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary

due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

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since 1986

since 1997